

S/133/61/000/002/009/014
A054/A033

Oxidation and Decarbonization of Steels in Heating Furnaces Fired With Natural Gas

The preheating of the air, which is necessary with the incomplete combustion of the natural gas, can be attained by conventional air heaters. Non-oxidizing heating reduces cinderling and at the same time, the thickness of the decarbonized layer. However, the decrease of this layer is less considerable than the decrease in losses due to cinderling. To reduce decarbonization other methods therefore, have to be applied in addition to incomplete combustion, as, e.g., coating with siliceous slag (Ref.5), A.A. Aleksandrov and Yu.A. Pan'kov: The Application of Coatings to Protect Steels from Oxidation and Decarbonization During Heating; in the collection: Processing of Metals and Heat Treatment; annex to Stal', 1959, pp. 214-240) or by blowing lithium carbonate into the furnace to form a protecting coating on the metal surface (Ref.6: F. Neuberger, et al. Fertigungstechnik, 1957, Vol.7, No.10 and Ref.7: H.W. Steading: Industrieblatt, 1958, Vol.58, No.4). There are 9 figures and 7 references (4 Soviet and 3 Non-Soviet). N

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A054/A033

Oxidation and Decarbonization of Steels in Heating Furnaces Fired With
Natural Gas

ASSOCIATIONS: VNIIMT , Zavod "Krasnyy Oktyabr" ("Krasnyy Oktyabr" Plant)

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24657

1164, 1147, 1418
24,7400 (1055, 1160, 1395)

S/076/61/035/006/009/013
B110/B220

AUTHORS: Andreyeva, V. V. and Shishakov, N. A. (Moscow)

TITLE: Structure of the surface layers of germanium and silicon
based on optical and electron diffraction data

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 6, 1961, 1351 - 1358

TEXT: Since the electrical properties of Ge and Si semiconductors are largely dependent on the reaction products with oxygen and moisture formed at the surface, their surface structure has to be studied thoroughly. The thickness of the nonmetallic surface layer was determined optically by means of a polarization goniometer (V. V. Andreyeva: Tr. In-ta fiz. khimii AN SSSR, vyp. VI, 79, 1957) when the reversible adsorption of oxygen through the surface of condensed germanium was studied. Films of very pure germanium on glass slides were obtained by evaporating Ge from a tungsten coil at 10^{-6} - 10^{-7} mm Hg and measured optically. After introduction of dry air further measurements were made. The thicknesses of the layers obtained from the measuring difference (Fig. 1) show: the true oxide film (I) which is constant in vacuo is covered by a volatile film (II) pre-
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B110/B220

Structure of the surface layers...

sumably consisting of molecular oxygen. In the first reaction period only (II) exists, whereunder (I) develops later on (after 34 days on air). When exposed <15 days, the total germanium film was reduced by <5 Å. Presumably the apparent reduction is due to diffusion of Ge atoms into the oxygen layer. After storage on air for 34 days (~50% relative humidity), an oxide layer of 80 Å thickness (Fig. 1) was reduced to 46 Å after 50 hr and to 52 Å after 6 hr of uninterrupted evacuation. This behavior which is typical for genuine metals is due to evaporation of the oxygen surface layer, breakdown of the equilibrium in the oxide film, rediffusion to the metal, etc. Thinner layers were obtained in two tests with pure dry O₂: at the beginning of exposure: 2-3 Å, after 48 hr: 4-6 Å. With (~50% air humidity) the thickness of the film increased to 10-14 Å and then remained constant. It was shown by four independent tests that water steam is not adsorbed on a surface of pure Ge. Only after repeated introduction and evacuation (17 mm Hg) of steam a water adsorption layer of about 3 Å was formed. Furthermore, the adsorption of oxygen on monocrystals was studied: polished Ge and Si samples cut from p-type monocrystals were etched, i.e.

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B110/B220

Structure of the surface layers...

Ge by HF and Si by 3 parts of HNO_3 + 1 part of HF. The film thickness was determined by measuring the ellipticity of the reflected light directly after polishing, after etching, and after different reaction times at room temperature (Table 1). The values are related to the polished surface = 0, thus not absolute, since the surface was already covered by a nonmetallic film. The nature of the film depends on the type of Si and on the etching process. The further change of the film due to atmospheric influence varies with different samples. In the case of Ge the film thickness increases rapidly for 8 days, then the increase is delayed, presumably due to the change of the semiconductor properties of etched Si and Ge. On not-etched polished samples the oxide layer grows with \sqrt{t} . This is explained by diffusion of Ge atoms into the oxygen layer. Probably local corrosion, formation of hydroxide, and further scarcely studied processes occur in the case of etched samples. Furthermore, the reaction with liquid water was studied in detail: Ge vaporized in vacuo upon glass slides was kept in the exsiccator with saturated water steam. After some days the initially black Ge layer became colorless and transparent. "Soluble" GeO_2 formed presumably by condenser water was found by electron diffraction. The intensities and

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Structure of the surface layers...

and spacings found by x-ray studies were similar to those of quartz. Contrary to quartz a marked reduction of the back reflexes and the background was verified for large scattering angles. Moreover, crystalline pure Ge powder obtained by zone melting was introduced into water and the latter vaporized at room temperature. The residue consisted of Ge (discontinuous X-ray reflexes) and the germanium oxide mentioned (continuous reflexes). Several sputtered Ge samples formed thick opaque and easily exfoliating layers due to adsorption of oxygen. Therefrom a white powder developed in water after some months, which could not be identified by radiography (spacings in Table 3). A maximum radial distribution curve corresponds to the distance of $1.9 \pm 0.1 \text{ \AA}$, thus Ge oxide or hydroxide are concerned. A 16% loss in weight at 500°C corresponds to $\text{Ge}(\text{OH})_2$ or $\text{GeO}_2 \cdot \text{H}_2\text{O}$. The side length of the Ge-O-tetrahedron is 3.1 \AA . There are 2 figures, 3 tables, and 15 references: 8 Soviet-bloc and 7 non-Soviet-bloc. The references to English-language publications read as follows: J. B. Gunn, Proc. Phys. Soc., 67 B, 409, 1954. J. T. Low, E. E. François, J. Phys. Chem., 60, 353, 1956; 59, 67, 1955. R. J. Archer, J. Electrochemical Soc., 104, No. 10, 1957.

Card 4/7

Structure of the surface layers...

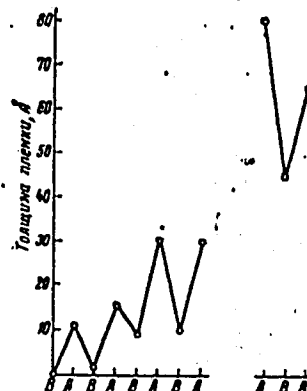
24657
S/076/61/035/006/009/013
B110/B220

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR)

SUBMITTED: October 12, 1959

Fig. 1: Varying thickness of the oxygen film adsorbed on germanium dependent on the surrounding medium: B) vacuum in 6 hr; A) atmospheric influence for 20-30 min. The right part was obtained after 34 days in normal air (~50 % humidity)

FIG. 1



Card 5'7

ANDREYEVA, V.V.

"Behavior and character of thin oxide films on some metals in gaseous media and in electrolyte solutions."

Report submitted for the Second Intl. Congress on Corrosion of Metals
New York City 11-15 March 1963

INSTITUTE OF PHYSICAL CHEMISTRY, MOSCOW

ANDREYEVA, V.V., inzh.; ROZENTAL', E.S., inzh.

Standards for plug and socket outlets with flat contactors.
Elektrotehnika 36 no.8:46-49 Ag '64. (MIRA 17:9)

L 6668-65 EWG(j)/EWT(m)/EPF(c)/EPR/EPF(q)/EPF(b) Pr-l; Ps-l; AFTC(p)/
 ASD(m)-3/SSD JD/JG
 ACCESSION NR: AP4042599 S/0076/64/038/007/1825/1830

AUTHOR: Andreyeva, V. V.

TITLE: The behavior and the nature of oxide films on certain metals in gaseous media and in electrolytic solutions. I. Chromium 7

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 7, 1964, 1825-1830

TOPIC TAGS: chromium, chromium corrosion, chromium passivation, passivation, corrosion, chromium oxides, film thickness, oxide film, metal surface

ABSTRACT: This article deals specifically with the results obtained during the study of thin surface layers, formed on chromium during the interaction with air and certain electrolytic solutions, the thickness of these layers and the kinetics of the growth of these layers and their destruction. The thickness of the surface layer was determined from the degree of optical polarization of reflected light on metals obtained by evaporation in a high vacuum and their condensation on the glass in the form of opaque films (~10 micron thick). The measurement of the starting values of the optical constants of metal were conducted in a high vacuum with continuous pumping down of the system. The thickness of the oxide film on

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ACCESSION NR: AP4042599

chromium, produced in the initial moments of contact with air, was 10 to 20 Å. After 24 to 48 hours the film attained a thickness of 25 to 35 Å after which the growth of its thickness stopped (see Fig. 1 of the enclosure). In solutions of H_2SO_4 during stationary potential the film thickness on chromium does not exceed 50 Å in contrast to other metals (titanium, molybdenum, nickel) in which it reaches values of the order of 300 to 400 Å. In the case of the anodic polarization of chromium in sulfuric acid solutions the transition from the passive to the active state is accompanied by the increase of current density and increase of the thickness of film to some definite values which depend on experimental conditions. This thickening of the film depends on two factors: (1) the change of the volume of the oxide in transition to a higher state of oxidation (specific volume of CrO_3 is 2.5 times greater than of Cr_2O_3); (2) the hydration of newly formed oxide. Thus, it has been shown directly that the dissolution of chromium in the trans-passive region proceeds through growth and partial dissolution of oxide. Orig. art. has: 8 figures.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR)

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L 6668-65

ACCESSION NR: AP4042599

SUBMITTED: 05Apr63

ENCL: 01

SUB CODE: MM

NO REF SOV: 009

OTHER: 005

Card 3/4

L 6668-65

ACCESSION NR: APO42599

ENCLOSURE: 61

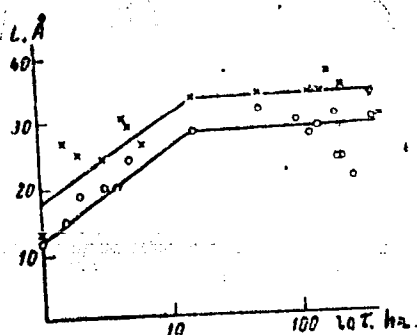


Fig. 1. Thickness of chromium oxide film, formed in air, and the kinetics of its growth at 25 C and normal pressure.

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L 7959-66.

ACC NR: AP5025738

SOURCE CODE: UR/0286/65/000/018/0088/0089

AUTHORS: Osipova, I. A.; Borodin, V. I.; Trushchelev, B. I.; Andreyeva, V. V. 3/

ORG: none

TITLE: Digital simulator. Class 42, No. 174834 [Announced by State Committee for Radio Electronics SSSR (Organizatsiya gosudarstvennogo komiteta po radioelektronike SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 88-89

TOPIC TAGS: digital system, computer simulation

ABSTRACT: This Author Certificate presents a digital simulator for producing the function $Y = 1/X$ by the method of piecewise linear approximation. To reduce the required equipment and to eliminate the necessity for setting the circuit with preparation of the problem, the device contains a reversible counter whose occupation is proportional to the argument X , a frequency divider, and a binary multiplier. The frequency divider has a variable scaling coefficient for varying the slope of the approximating line and is controlled by the most significant digits of the counter. The binary multiplier, which is connected to the least

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UDC: 681.142.642

L 7959-66

ACC NR: AP5025738

significant digits of the counter, establishes the size of the approximation step within each segment depending on the occupation of the least significant digits of the reversible counter.

SUB CODE: DP/ SUBM DATE: 01Aug64

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Card 2/2

E 28407-66 EWT(m)/ENP(w)/EPF(n)-2/T/ENP(t)/ETI IJP(c) JD/JG/WB/3D
 ACC NR: AT6013786 (N) SOURCE CODE: UR/0000/65/000/000/0029/0042

AUTHOR: Glukhova, A. I.; Andreyeva, V. V.; Glazunov, S. G.; Solonina, O. P.;
 Nikulova, V. F.

ORG: none

TITLE: Study of the corrosion resistance and electrochemical and mechanical
 properties of alloys of the niobium-titanium system

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2.
 Moscow, Izd-vo Metallurgiya, 1965, 29-42

TOPIC TAGS: corrosion resistance, electrochemistry, niobium base alloy, titanium
 containing alloy, electric potential, mechanical property, metal hydride

ABSTRACT: This is the first in a series of two articles on the same subject: it
 deals with alloys of the Ti-Nb system containing up to 40% wt. Ti, whereas the
 second article (same issue, pp 43-58) deals with the same alloys when they contain up
 to 50% wt. Nb. Mechanical tests of specimens of these alloys showed that the alloys
 containing 50 and 60% Nb have an ultimate strength of 63 and 68 kg/mm², respectively.
 For the alloy with 70% Nb this strength sharply increases to 78 kg/mm², but any
 further increase in the Nb content is no longer as effective; the increase in
 hardness follows a similar pattern. Tests of corrosion rate and electrochemical
 properties in H₂SO₄, HCl, H₃PO₄, HNO₃ and oxalic acids of various concentrations at
 40 and 100°C showed that these alloys have a high corrosion resistance in strongly

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ACC NR: AT6013786

aggressiva media and that this resistance increases with increasing Nb content of the alloy, decreases with increasing Ti content and is higher at 40°C than at 100°C. The maximum corrosion of the alloys in acid media was observed for a potential of -100 mv. The corrosion resistance of the alloys is the higher the more positive (from -100 mv upward) is the potential of the metal-acid redox system. In the presence of more negative potentials a hydride layer forms and the metal gets embrittled owing to the diffusion of hydrogen through the metal. A major finding is that the maximum corrosion resistance of these alloys is entirely determined by the corrosion resistance of Nb to a given medium: for example, if the corrosion resistance of pure Nb to a given H₂SO₄ solution at the temperature T is 0.05 g/(m²-hr) then any Nb-Ti alloy, whatever the proportions between these two elements, will not have a higher corrosion resistance than that; thus, the use of Nb-Ti alloys corrosion-resistant in the corresponding media makes it possible to reduce the consumption of such a scarce and expensive metal as Nb, and besides this hardly affects the mechanical properties of the alloys. Orig. art. has: 11 figures and 3 tables.

SUB CODE: 07,11 SUBM DATE: 19Jul65/ ORIG REF: 006/ OTH REF: 002

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28106-66 EWT(m)/EMP(w)/T/EMP(t)/STI IJP(c) JD/JG/WB/OD
 ACC NR: AT6013787 (N)

SOURCE CODE: UR/0000/65/000/000/0043/0058

AUTHOR: Andreyeva, V. V.; Kazarin, V. I.; Alekseyeva, Ya. L.; Glazunov, S. G.;
Solonina, O. P.; Nikulova, V. F.

ORG: none

TITLE: Study of the corrosion resistance and electrochemical and mechanical properties of alloys of the titanium-niobium system

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2
 Moscow, Izd-vo Metallurgiya, 1965, 43-58

TOPIC TAGS: corrosion resistance, electrochemistry, titanium containing alloy,
 niobium containing alloy, acid, metal heat treatment

ABSTRACT: This is a continuation of a previous investigation (this issue, pp 29-42) with the difference that it deals with alloys of the Ti-Nb system containing up to 50% wt. Nb. Both metals in unalloyed state have a high corrosion resistance, but in certain solutions, e.g. sulfuric and hydrochloric acid solutions, Ti dissolves at a sufficiently fast rate whereas Nb remains corrosion-resistant. Hence, the addition of Nb to Ti should increase the corrosion resistance of Ti. Mechanical tests of these alloys show that as the Nb content increases (up to 8%) the ultimate strength of the alloy increases from 57 kg/mm² to 92 kg/mm²; as the Nb content is further

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L. 28406-66

ACC NR: AT6013787

increased above 8%, however, ultimate strength decreases; a similar pattern of variation with Nb content is displayed by plasticity and hardness. In 10, 40, 60, 75 and 94% solutions of H_2SO_4 the alloys at 40°C, whether in hot-forged state or after heat treatment (heating at 920-650°C for 1 hr, water quenching, aging at 450°C for 10 hr with cooling in air), display a general increase in corrosion resistance with increase in Nb content. A similar pattern, on the whole, is observed when the alloys are placed in HPO_3 , HCl , HNO_3 , and oxalic acid. For the alloys containing upward of 30% Nb, however, aging leads to decomposition of the β -phase, which deteriorates their corrosion resistance. Plotting of the curves of variation in current density as a function of the specified potentials (starting with -0.8 v and ending with +2.2 v) showed that the maximum corrosion rate corresponds to a potential of -0.25 v. As the Nb content of the alloys increases, the critical density of the passivation current decreases and the normal hydrogen potential shifts in the direction of more positive values. The addition of Nb to Ti enhances the corrosion resistance of Ti in solutions of non-oxidizing acids and does not affect the high corrosion resistance of Ti in oxidizing solutions such as 57% HNO_3 or a mixture of HNO_3 and HCl in the ratio of 1:1 or 2:1 at 100°C. Orig. art. has: 9 figures, 5 tables.

SUB CODE: 07, 11, 20

SUBM DATE: 19Jul65/

ORIG REF: 003/

Card 2/2 LC

L 28402-66 EWT(m)/EPF(n)-2/EWP(t)/ETI IJP(c) JD/JG/WE/QD
ACC NR: AT6013793 (A) SOURCE CODE: UR/0000/65/000/000/0136/0147

AUTHOR: Andreyeva, V. V.; Kazarin, V. I.; Kudryashova, T. I.

ORG: none

TITLE: Corrosion and electrochemical behavior of titanium and its alloys in wet-process phosphoric acid

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2
Moscow, Izd-vo Metallurgiya, 1965, 136-147

TOPIC TAGS: corrosion, electrochemistry, titanium, phosphoric acid

ABSTRACT: The evaluation of the corrosion resistance and electrochemical properties of Ti in wet-process phosphoric acid is of major interest in view of the planned expansion of the production of phosphoric fertilizers in the USSR. Wet-process phosphoric acid is produced by decomposing apatites with H_2SO_4 . The experiments with technical Ti as well as with Ti alloys containing 1, 5, 10, 15, 20, 30 and 40% Mo and 10, 20, 30, 40 and 50% Nb were performed in wet-process phosphoric acid (32.1% P_2O_5 , 0.2% CaO, 1.67% SO_3 , 0.4% Fe_2O_3 , 0.4% Al_2O_3 , 0.02% MgO, 0.6% SiO_2 , 2.28% F, 0.02% Na, 0.02% K, 59.46% H_2O ; other elements 5.58%). The principal

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ACC NR: AT6013793

components of this acid are: H_3PO_4 (up to 50%), H_2SiF_6 (1-3%) and $Fe_2(SO_4)_3$; it is they that markedly affected the corrosion and electrochemical behavior of the metals. The electrochemical studies were performed with the aid of an electronic potentiostat, while the potentials were measured by means of the compensation method with respect to a calomel reference electrode and converted in terms of a normal hydrogen electrode. Findings: the corrosion rate of Ti in phosphoric-acid solutions is a function of the potential. In the presence of specific values of the potential Ti is capable of passing over to passive state. On the basis of the dependence of the density of passivation current on the concentration and temperature, it is possible to establish the regions of concentrations and temperature of phosphoric acid at which Ti displays satisfactory corrosion resistance. Ti in wet-process phosphoric acid is corrosion-resistant (corrosion rate up to 0.1 mm/year) at up to 40°C. The presence of Fe^{3+} preserves the passive state of Ti at up to 60°C, but at 60°C the corrosion rate then rises to 0.3 g/(m²-hr) (0.6 mm/year). Adding Mo to Ti increases the latter's corrosion rate, the more the higher the Mo content of the alloy is, following the relation: $K = 0.354 \exp [0.184\% \text{ (by wt.)}]$, owing to repassivation with respect to Mo as a result of the presence of Fe^{3+} ions in the wet-process phosphoric acid. Adding Nb, on the other hand, improves the corrosion resistance of Ti in the acid, and then the corrosion rate decreases following the relation: $K = 0.354 \exp [-0.027\% \text{ (by wt.)}]$. Orig. art. has: 10 figures

SUB CODE: 07, 11,

SUBM DATE: 19Jul65/ ORIG REF: 005/ OTH REF: 003

Card 2/2 LC

L 28395-66 EWT(m)/EWA(d)/EWP(t)/ETI IJP(c) JD/JG/WB

ACC NR: AT6013784 (N) SOURCE CODE: UR/0000/65/000/000/0014/0020

AUTHOR: Andreyeva, V. V.; Stepanova, T. P.

ORG: none

TITLE: Effect of treatment with silver and palladium on the corrosion and electro-chemical behavior of stainless steels

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2 Moscow, Izd-vo Metallurgiya, 1965, 14-20

TOPIC TAGS: chromium steel, corrosion, electrochemistry, silver, palladium, sulfuric acid, passivator additive/Kh23N23M3D3 stainless Cr-Ni steel

ABSTRACT: Considering the decisions of the December 1963 Plenum of the CC CPSU to expand chemical industry in the USSR, more attention is being paid to the production of H₂SO₄ -- a raw material for the production of fertilizers. But this requires new structural materials resistant to H₂SO₄ solutions at temperatures of 115-120°C. The stainless Cr-Ni steels (treated with Mo and Cu) developed in the last few years in the USSR resist this acid only at temperatures of up to 80-100°C; hence the authors explore ways of increasing the resistance of these and particularly of Kh23N23M3D3 steel (0.15% C, 0.55% Mn, 0.65% Si, 22.6% Cr, 24.26% Ni, 2.91% Cu, 2.28% Mo) by

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L 28395-66

ACC NR: AT6013784

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treating it with the noble elements Pd and Ag with a low hydrogen overvoltage (Pd) and high hydrogen overvoltage (Ag), which assure transition to passive state by influencing the cathodic or anodic process. The investigation was performed in a H_2SO_4 solution (conc. 35%) at $100^\circ C$, with weighing of specimens before and after the tests. Findings: Ag somewhat increases the corrosion rate while Pd reduces it, but over a longer period of time (>10 hr) the corrosion rate of Ag-treated steel slows down until it exceeds that of the non-treated steel. The negative effect of Pd on the corrosion rate of the investigated steel is due to its high Ni content as was confirmed by subsequent tests of melts of this steel with various contents of Ni (from 9 to 28%), which showed that the increase in the Ni^{12} content of the alloy with a fixed content of Cr, Mo and Cu causes the passivation potential to shift in the positive direction, i.e. the passivation process becomes impeded and the critical density of the passivation current increases with increasing Ni content. Both Ag and Pd reduce the corrosion losses in the active region (probable cause: retardation of the anodic process). Under stationary conditions, however, the potential of Pd-treated Cr-Ni-Mo-Cu steel has a higher positive value than that of the untreated steel. Since under stationary conditions these steels are in active state, in the absence of anodic passivation any shift of potential in the positive direction -- as e.g. induced by treatment with Pd -- leads to an increase in corrosion rate. Thus, cathodic alloying produces positive results only in cases where the passivation

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ACC NR: AT 6013784

potential of the metal alloyed has a more negative value than the potential of the reversible hydrogen electrode -- and Pd has a low hydrogen overvoltage compared with the high hydrogen overvoltage of Ag. Orig. art. has: 7 figures, 1 table. 0

SUB CODE: 07, 11, / SUBM DATE: 19Jul65/ ORIG REF: 005/ OTH REF: 001

Cord 3/3 CC

L 47369-66 EWT()/ENP()/ETI LJP() ID/JG/W

ACC NR:

AR6028430

SOURCE CODE: UR/0137/66/000/005/1066/1066

AUTHOR: Andreyeva, V. V.; Stepanova, T. P.

51
B

TITLE: The effect of ²⁷silver and ²⁷palladium additions on the ¹⁶corrosion and electrochemical behavior of ¹⁶stainless steels

SOURCE: Ref. zh. Metallurgiya, Abs. 51455

REF SOURCE: Sb. Korroziya met. i splavov, No. 2. M., Metallurgiya, 1965, 14-20

TOPIC TAGS: stainless steel, palladium, silver, corrosion, corrosion resistance

ABSTRACT: A study was made on the effect of alloying a metal having a low (Pd 3 and 5 wt %) and a high (Ag 3 wt %) hydrogen overvoltage on the corrosion and electrochemical behavior of Cr-Ni steel alloyed with Mo and Cu (Kh23N23M-3D3) in a 35% solution of H₂SO₄ at 100C. Samples were weighed before and after testing. Alloying with Pd lowered the corrosion resistance of Kh23N23M3D3 steel

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UDC: 669.15' 26' 24' 28' 3.018.8

L 47366-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJR(c) JD/JG/WR
ACC NR: AR6028141 SOURCE CODE: UR/0137/66/000/005/I083/I083

AUTHOR: Glukhova, A. I.; Andreyeva, V. V.; Glazunov, S. G.; Solonina, O. P. ³⁷_B

TITLE: Investigation of the corrosion resistance and electrochemical and mechanical properties of alloys of the system niobium and titanium ¹⁶₂₁

SOURCE: Ref. zh. Metallurgiya, Abs. 51575

REF SOURCE: Sb. Korroziya met. i splavov. No. 2. M., Metallurgiya, 1965, 29-42

TOPIC TAGS: niobium alloy, titanium niobium alloy, corrosion resistance

ABSTRACT: Niobium alloys with 2—40% titanium have high corrosion resistance in solutions of mineral acids at a temperature of 40C. An increase in titanium content decreases corrosion resistance. Maximum corrosion is observed in acid media at an energy potential of 100 mv. Formation of a hybrid layer and embrittlement of Me occurs at more negative potentials due to diffusion of H in Me. [Translation of abstract] [NT]

SUB CODE: 11/

Card 1/1 afs

UDC: 669.293.5

L 47367-66 EWT(m) EWP(w)/I/EWP(I) ETI I P(c) JD/JG/WB
ACC NRT AR6028442 SOURCE CODE: UR/0137/66/000/005/1085/1085

AUTHOR: Andreyeva, V. V.; Kazarin, V. I.; Alekseyeva, Ye. L.; Glazunov, S. G.; Nikulova, V. F.; Solonina, O. P. ³⁶_B

TITLE: Investigation of the corrosion resistance and electrochemical and mechanical properties of alloys of the system niobium and titanium

SOURCE: Ref. zh. Metallurgiya, Abs. 51590 ²⁷ ₂₇

REF SOURCE: Sb. Korroziya met. i splavov. No. 2, M., Metallurgiya, 1965, 43-58

TOPIC TAGS: niobium titanium alloy, corrosion resistance/Ti20Nb alloy

ABSTRACT: Titanium alloys with 2--50% niobium have been investigated. Alloying of titanium with niobium considerably increases σ_s and H_B of Ti. Thus, after hot forging the Ti-20Nb alloy has σ_s of $\sim 104 \text{ Mn/m}^2$ (Ti 60 mn/m^2), $\sigma_B \sim 11\%$ (Ti $\sim 18\%$). The corrosion resistance of alloys in solutions of unoxidative acids is considerably higher than that of titanium. In such acids as HNO_3 , the resistance of titanium and titanium-niobium is identical. The critical density of passivating current decreases with an increase of niobium content in

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UDC: 669.295.5

ACC NR: AT7004161

SOURCE CODE: UR/0000/66/000/000/0041/0051

AUTHOR: Andreyeva, V. V.; Stepanova, T. P.

ORG: none

TITLE: Properties of pure molybdenum, tungsten, and vanadium metals and their effect on the corrosion and electrochemical behavior of chromium-nickel-copper steel

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruktsionnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo Nauka, 1966, 41-51

TOPIC TAGS: corrosion, corrosion resistance, chromium containing alloy, corrosion rate, chromium nickel copper steel, alloying element

ABSTRACT: A study was made of the effect of molybdenum, tungsten, and vanadium on the corrosion and electrochemical behavior of chrome-nickel-copper

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ACC NR: AT7004161

steel in a sulfuric acid solution at high temperatures. The study showed that the corrosion resistance of this alloy is most effectively improved by molybdenum, tungsten, and vanadium in that order. All the investigated elements have an inhibiting effect on the anodizing process. Orig. art. has: 6 figures and 1 table. [SP]

SUB CODE: 11/SUBM DATE: none/ORIG REF: 010/OTH REF: 005/

Card

2/2

ACC NR: AT7004167

acid. Titanium alloys containing up to 13% nickel were found to be highly resistant to corrosion at 40 C in solutions containing up to 20% sulfuric acid. An increase in the amount of acid decreases the alloy's resistance to corrosion. Curves showing the relationship between the acidity of the solution and the rate of corrosion indicate two maxima: one at 40% of acid content and the other at 75%. An increase in the amount of nickel in the alloy (up to 20, 30, and 50%) increases the rate of corrosion in the alloy. Apparently the corrosion resistance of Ti—Ni alloys depends greatly on the structure of the alloy. Titanium-nickel alloys subjected to anodic polarization in a sulfuric acid solution change from an active to a passive state, and an increase in the amount of acid leads to an increase in the current density to maintain the passivity. The authors express their gratitude to N. V. Ageyev, Corresponding Member AN USSR and L. A. Petrova, Senior Scientific Associate, Institute of Metallurgy, AN USSR for making available samples of alloys for the study. Orig. art. has: 5 figures and 1 table. [SP]

SUB CODE: 11/SUBM DATE: 27Sep66/ORIG REF: 005/OTH REF: 003/

Card 2/2

ACC NR: AT7004170

an increase of tantalum content from 0.24% to 19.8% in forged specimens resulted in an increase in tensile strength from 607 to 764 Mn/m² and elongation from 18 to 25%. It was also found that the tensile and yield strengths of hot-forged specimens were considerably higher than those of specimens annealed at 1250C for 2 hr. This indicates that there was not sufficient time for recrystallization during forging at 800—1200C. Corrosion tests of niobium, tantalum and niobium-tantalum alloys were carried out in various solutions of sulfuric, hydrochloric and nitric acids. It was found that the corrosion rate of the alloys decreases with increased tantalum content. For instance, the corrosion rate of an alloy containing 5% tantalum in a 40% solution of sulfuric acid was 0.09 g/m²·hr, while that of an alloy containing 30% tantalum was 0.01 g/m²·hr. Alloys containing not less than 5% tantalum were found to be completely corrosion-resistant in a 20% solution of hydrochloric acid. This high corrosion-resistance of niobium-tantalum alloys is due to the presence of a protective film of mixed tantalum and niobium oxides, such as Ta₂O₅ and Nb₂O₅. Orig. art. has: 7 figures and 1 table. [TD]

SUB CODE: 1120/ SUBM DATE: 27Sep66/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 5115

Card 2/2

SHEVCHENKO, V.; ANDREYEVA, Ye.; POSLAVSKIY, Yu.

International symposium. Zashch. rast. ot vred. i bol. 10
no.8:57-58 '65. (MIRA 18:11)

ANDREYeva, Ye. A.

Andreyeva, Ye. A. "Change in the erythrocyte sedimentation reaction in connection with penicillin therapy," Trudy Khovrin. obl. klinich. bol'nitsy, Khovrino (Moscow Oblast), 1948, p. 77-83

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

ANDREYEVA, Ye. A.

ANDREYEVA, Ye. A.: "Changes in the agrochemical properties of sod-podzolic soils with various systems of deepening the plowed layer." Acad Sci USSR. Soil Inst imeni V. V. Dokuchayev. Moscow, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN AGRICULTURAL SCIENCES).

So.: Knizhnaya Letopis',
No. 25, 1956. Moscow.

KAZANSKAYA, T.B.; ANDREYEVA, Ye.A.

Effect of nitrogen fractions of soya flour and certain amino acids
on growth and the biosynthesis of streptomycin. Trudy Inst.
mikrobiol. no. 6:225-233 '59. (MIRA 13:10)

1. Institut mikrobiologii AN SSSR.
(AMINO ACIDS) (SOY-BEAN FLOUR) (STREPTOMYCIN)

~~ANDREYEV, Ye. A.~~

ANDREYEVA, Ye. A.

Using radioactive phosphorus for determining the available phosphorus content of soils under various depths of plowing [with summary in English]. Pochvovedenie no.4:35-39 Ap '57. (MLRA 10:7)

1. Pochvennyy institut im. V.V. Dokuchayeva Akademii nauk SSSR.
(Soils--Analysis) (Phosphorus) (Plowing)

ANDREYEVA, Ye.A.

How various methods of deepening the plow layer affect agrochemical properties of turf-Podzolic soils [with summary in English].
Pochvovedenie no.4:41-50 Ap '58. (MIRA 11:5)

1. Pochvennyy institut im. V.V. Dokuchayeva AN SSSR.
(Flowing) (Podzol)

ANDREYEVA, Ye.A.

Natural radioactivity of soils and determination of total soil potassium by the radiometric method. Pochvovedenie no.5:21-29 My '60. (MIRA 14:4)

1. Pochvennyy institut imeni V. V. Dokuchayeva, AN SSSR.
(Soils--Potassium content)
(Radioactivity)

L 17148-65 EPA(s)-2/EWT(s)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10
ACCESSION NR: AR4049273 WW/RM S/0081/64/000/015/K012/K012 /- 18

SOURCE: Ref. zh. Khimiya, Abs. 15K82

AUTHOR: Andreyeva, Ye. A., Bulayev, D. P., Zinevich, A. M., Prokof'yev, V. I.,
Serafimovich, V. B.

TITLE: Protective coating of underground piping with adhesive polymer films

CITED SOURCE: Tr. Vses. n. - i. in-ta po str-vu magistral'n. truboprovodov. vy*p.
17. 1963. 5-51

TOPIC TAGS: underground pipe, insulation material, polymer film, adhesive polymer film, protective coating, polyethylene film, polyvinyl chloride

TRANSLATION: The authors studied and developed new insulation materials based on adhesive polymer films. They also developed methods of applying these coatings to piping, improved the procedures for evaluating film properties and wrote requirements for adhesive polymer films designed for pipe insulation. It is noted that the high-pressure adhesive polyethylene films for underground piping insulation, currently manufactured by the Okhtinskiy Khim. Kombinat (Okhtinsk Chemical Combine) according to the technical

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specifications of VNIIST satisfy the requirements for pipe coatings. As indicated by experiments, these films can be used year-round to coat piping at air temperatures above and below the freezing point. Introduction of the use of adhesive polymer films is limited at present by their inadequate supply and high cost. The economic effectiveness of applying adhesive films on piping represents an important aspect in the introduction of this product. Comparative calculations of the cost efficiency in applications of adhesive polyvinyl chloride films and strongly reinforced bituminous resin insulation on 720-mm pipe have demonstrated that the use of plastic films in place of bituminous compositions can produce an annual saving (per 100 km of piping) totalling 122,200 rubles. Bibl. with 23 titles. N. Popova

ASSOCIATION: none

SUB CODE: MT

ENCL: 00

Card 2/2

IYERUSALIMSKIY, N.D.; ANDREYEVA, Ye.A.; GRISHANKOVA, Ye.L.; GOLOVLEV, Ye.L.;
DOROKHOV, V.V.; ZHUKOVA, L.N.

Study of microflora of refinery waste waters. Prikl. biokhim.
i mikrobiol. 1 no.2:163-166 Mr-Ap '65.

(MIRA 18:11)

1. Institut mikrobiologii AN SSSR, Moskva.

ANDREYEVA, Ye. A. (IAT AN SSSR)

"Results of the Analytical Investigation of the Force- and Consumption Characteristics of Elements of the Nozzle-flap Type."

report presented at the Scientific Seminar on Pneumo-Hydraulic Automation, 28-29 May 1957, at the Inst. for Automation and Remote Control (IAT), Acad. Sci. USSR

Avtomatika i Telemekhanika, 1957, Vol. 18, no. 12, pp. 1148-1150, (author SEMIKOVA, A. I.)

28(1)

PHASE I BOOK EXPLOITATION

Akademiiya nauk SSSR. Institut avtomatiki i telemekhaniki.
Seminar po pervaogidravlicheskoj avtomatike. Ist. Moscow, 1957

618525, ustroystva i elementy pnevm- i gidrovostorakli: (Pneumatic and Hydraulic Circuits, Devices, and Elements in Automation). [Collection of Papers.] Moscow, Izdatvo AN SSSR, 1959. 233 p. Errata slip inserted. 2,700 copies printed.

Resp. Ed.: N. A. Ayzerman, Doctor of Technical Sciences, Professor;
Ed. of Publishing House: A. A. Tal'; Tech. Ed.: T. P. Polyakova.

PURPOSE: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

NOTE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, May 26, 1957. The collection includes 1) papers on pneumatic and hydraulic devices developed in the USSR, 2) papers on pneumatic and hydraulic devices developed in the West, 3) papers on pneumatic and hydraulic devices, including regulating units, transmitters and transducers, actuating mechanisms, special-purpose devices, and auxiliary equipment and 4) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent magnets and diaphragms. No personalities are mentioned. References follow several of the papers.

Media Controllers

Andreyeva, Ye. A. Moscow]. Calculating the Static Character-
istics of Back-Pressure Type Elements. 172

This paper deals with a theoretical analysis of back-pressure type elements. Flow of fluid, pressure distribution on plates, and general characteristics are discussed.

Shuskly, N.P. Moscow. Results of Experimental and Theoretical Investigations of Back Pressure Time Control Devices (1964)

Bozakhaya, A.V. *Ussesov*. High-velocity laminar air flow in investigations of back-pressure type control devices

Flat Capillary Channels

investigated and results shown graphically. Charts to be used for determining resistance coefficients and flow rates are

presented.
Michlin, I. M. *Roscon*7. Nozzle Clogging and Methods of Combating

The tendency of certain working fluids toward nozzle and

slit clogging is examined. Minimum dimensions of nozzle and slit sections at which the fluid flow rate remains stable are determined. Some practical methods of combating clogging

are presented.

Diaphragms

Alfanov, V.V. Moscow. On Variation of Effective Areas of Fabric Diaphragms

Changes in the magnitude of effective areas of corrugated diaphragms during the stroke are analyzed and their significance is discussed.

case in the design of a KETAMA pneumatic regulator discussed.

Characteristics of Diaphragms Used in Sensitive Elements of Regulators

characteristics of rubberized-fabric diaphragms made from various materials are discussed. The amount of hysteresis in relation to the stroke and the influence of the temperature on the

Test results of the temperature of the surrounding medium are investigated. Test results of beryllium-bronze diaphragms are presented.

Problems in Pneumatic and Hydraulic Automation

SOV/4671

operation of pneumatic devices. Some articles of this collection were written in the German Democratic Republic and in Czechoslovakia and reflect a somewhat different approach to automation problems. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

GENERAL PROBLEMS OF PNEUMATIC AND HYDRAULIC AUTOMATION DEVICES

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| Vayner, I.V. Analysis of the Possibility of Low Pressure Operation of Pneumatic Automation Instruments | 3 |
| Semikova, A.I., Experimental Investigation of Characteristics of Jet Components of Pneumatic Automation Devices | 11 |
| Andreyeva, Ye.A. On the Calculation of Characteristics of the Nozzle-Baffle Pneumatic Component | 17 |
| Kokhlov, V.A., On the Method of Analysis of Dynamics of Following Systems With Hydraulic Executive Mechanisms | 24 |

Card 2/5

Andre Ye. A. Ye. H.

10.2000

5/103/60/021/007/006/010
B019/B060
82071

AUTHOR: Andreyeva, Ye. A. (Moscow)

TITLE: Calculation of the Static Characteristic of the
3 "Nozzle Shutter" Element

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 7,
pp. 982 - 996

TEXT: A calculation method is given here for the construction of the characteristics of a "nozzle shutter" element for compressible and incompressible viscous liquids. Incompressible liquids are considered in the first section, the first part of it dealing generally with the steady flow of a viscous incompressible liquid in a radial aperture. The setup of the field of velocity below the shutter and of the pressure distribution in the radial aperture is discussed next. The following part deals with some known solutions for special cases (nonviscous liquids, neglect of inertia, etc.). The flow function and the field of velocity are determined in a rigorous solution of the problem in the third part, and in the fourth, the author derives the pressure

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Calculation of the Static Characteristic of
the "Nozzle Shutter" Element

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B019/B060

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distribution in the radial aperture. Mention is made of the good agreement of present results with experimental data. Next, the construction of the output characteristic is dealt with, and Fig. 4 is a graphic representation of a comparison between experimental data and results obtained here, showing a partly good agreement. The deviation of the calculated characteristics from the experimental ones is brought in connection with the laminar flow presupposed in the derivation. The power characteristic of the "nozzle shutter" element is then derived (Fig. 5), and it is shown that the results are likewise right for laminar flows only. The second section of the present paper deals with the investigation of a viscous compressible liquid, the output and power characteristics (Figs. 6, 7) are derived here on the basis of results obtained in the first part. It is generally established that experimental results are in good agreement with a Reynolds number $Re < 800$, whereas no more than a qualitative agreement is found with $Re > 800$. There are 7 figures and 9 references: 8 Soviet and 1 American.

SUBMITTED: March 7, 1960

Card 2/2

LT

ANDREYEVA, Ye. A.

Cand Tech Sci - (diss) "Study of static characteristics of the controlling element "valve-nozzle". Moscow, 1961. 14 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Inst of Chemical Machinery Building); 200 copies; price not given; (KL, 10-61 sup, 212)

L 36092-66 EWT(m)/T WE
 ACC NR: AP6015206 (A) SOURCE CODE: UR/0411/65/001/002/0163/0166
 AUTHORS: Iyerusalimskiy, N. D.; Andreyeva, Ye. A.; Grishankova, Ye. L.; Golovlev, Ye. L.; Dorokhov, V. V.; Zhukova, L. N. 53
 ORG: Institute of Microbiology, Academy of Sciences, SSSR, Moscow (Institut mikrobiologii Akademii nauk SSSR) B
 TITLE: A study of the microflora of sewage of petroleum refineries
 SOURCE: Prikladnaya biokhimiya i mikrobiologiya, v. 1, no. 2, 1965, 163-166
 TOPIC TAGS: bacteria, fuel microorganism, industrial waste, petroleum refining, yeast, aromatic hydrocarbon, diesel fuel, kerosene
 ABSTRACT: The results of a study of active slime from petroleum refineries are given. Active slimes from waste phenolic water and from oil traps (purified of petroleum by six-fold extraction by benzene) were studied. Recent and old slimes from oil refinery No. 4 and a sample of slime from the trap of No. 4 were also studied. The specimens were kept in the active state in Sengen's medium at pH 7. From the slimes, 575 cultures were extracted, and 145 other cultures were extracted from similar sources. The mycobacteria were 44%, the bacteria 28%, and yeast 26%. All the bacteria were gram-negative nonspore-forming. They were represented mostly by Pseudomonas and Achromobacter. The yeasts were Candida and Torulopsis. All of the extracted microorganisms grew well in pure kerosene, pure paraffin, diesel-fuel distillate, and
 Card 1/2 UDC: 622.35+613.663

L 36092-66

ACC NR: AP6015206

paraffin-base petroleum. It was found that only certain mycobacteria and bacteria grow in aromatic hydrocarbons. Orig. art. has: 3 tables.

SUB CODE: 0611/SUBM DATE: 18Jan65/ ORIG REF: 003/ OTH REF: 009

LS
Card 2/2

IYERUSALIMSKIY, N.D.; ANDREYEVA, Ye.A.; LIROVA, S.A.; YERMAKOVA, I.T.

Hydrocarbon oxidation by yeast. Prikl. biokhim. i mikrobiol.
1 no. 6:601-605 N-D '65. (MIRA 18:12)

1. Institut mikrobiologii AN SSSR. Submitted Jan. 16, 1965.

ANDREYEVA, Ye.A., kand. khimicheskikh nauk; BULAYEV, V.I., inzh.;
VALYUSKAYA, D.P., inzh.; ZINEVICH, A.M., inzh.; PROKOF'YEV,
V.I., kand. tekhn. nauk; SERAFIMOVICH, V.B., inzh.

Protecting underground pipelines with cementing polymer
coatings. Trudy VNIIST no.17:5-52 '63. (MIRA 18:3)

The effect of corrosion inhibitors on the corrosion fatigue of steel in water accompanying petroleum deposits B. Andreeva, V. Negrety, and I. Patman. *Novaya Nefyanov*

Tekhn., Neftpromyslovoe Delo 1950, No. 6, 43-6.—The combination of strain or pressure with the action of corrosive agents results in greater corrosion than is expected from the effects of either stress or chem. attack alone. Corrosion fatigue of steel rods in 2 different water samples and the effect of H_2S and of corrosion inhibitors was studied by placing a polished steel specimen in the center of a glass tube filled with the test soln. and crude oil, and exposing the system to varying pressures. Hard water was found to reduce greatly the fatigue of steel. By adding inhibitors such as Na chromate (5 g./l.), fatigue increases, 19-23 kg./sq. mm. In alk. water, H_2S (50 mg./l.), the fatigue resistance of the sample is approx. the same as in hard water. Alk. water contg. 200 mg. of H_2S /l. lowers considerably the resistance of the sample. Adding 50 mg. of $HCHO$ /l. to alk. water contg. H_2S increases the resistance of steel, and removal of H_2S further improves results. Addn. of Na chromate to alk. water free from H_2S does not improve the resistance of steel. The wetting properties of the corrosive solns. were found to be important; hard and alk. waters, contg. 200 mg. of H_2S /l., which were most corrosive, have better wetting properties than other water samples studied, while alk. water and hard water contg. inhibitors were less surface active. H. G. Vueller

Influence of static pressure on the corrosion of ground water, also published in *Journal of Applied Electrochemistry*, Vol. 7, No. 6, 1977, pp. 1000-1004. By J. C. Voelker and R. A. Anderson. The authors have previously published a paper in *Journal of Applied Electrochemistry*, Vol. 7, No. 6, 1977, pp. 1000-1004. In this paper, the polarization of electrodes formed on the surface of deq. the polarization of electrodes formed on the surface of corroding steel can be used to evaluate corrosion of steel in the water accompanying petroleum deposits. The method is very sensitive to corrosive gases, inhibitors in the water, and to stress or strain in the steel. By applying static stress, the open circuit potential shifts over to the negative side. The characteristics of the cathodic and anodic polarization curves showed that the application of static pressure activated the electrodes of the corrosion-producing couples. In the absence of gases which are also corrosion activators, such as H_2S and air, the rate of corrosion is very low. The most severe corrosion was observed in the presence of H_2S and large amounts of air. The corrosive action of H_2S alone in complete absence of air is considerably weaker. Addition of $HCHO$ to water contaminated by H_2S had a significant inhibiting effect. H. C. Voelker

ANDREYEVA, Ye.A., kandidat khimicheskikh nauk; PAUKOV, A.D.; VALUYSKAYA,
D.P.; HON', F.N., redaktor; DEMIDOV, Ya.F., tekhnicheskiy redaktor

[The effect of superimposed direct current on bitumens covering
of steel pipes] Vliianie nalozhennogo postoiannogo toka na bitumnye
pokrytiia stal'nykh truboprovodov; nauchnoe soobshchenie. Moskva,
Otdel nauchno-tekhn. informatsii, 1955. 15 p. (MLRA 9:12)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut po
stroitel'stvu.

(Pipe, Steel--Corrosion) (Protective coating)

ANDREYEVA, Ye.A., kandidat khimicheskikh nauk; ZHUKOV, V.I., inzhener;
~~ZHUKOV, A.D.~~, inzhener; VALUYSKAYA, D.P., inzhener.

Effect of a superimposed continuous current on the bituminous
coating of steel pipelines. Trudy VNIISTROINEFT' no.8:52-80 '56.
(MLRA 9:11)

(Electrolytic corrosion) (Protective coatings) (Pipelines)

Андреева, Ye. A.

ANDREYEVA, Ye. A.; ZHUKOV, V.I.; BULAYEV, V.I.; VALUYSKAYA, D.P.; KOMAROVA,
L.S., red.; DEMIDOV, Ya.P., tekhn.red.

[Bituminous coatings for cathode protection] Bitumnye pokrytiia v
usloviakh katodnoi zashchity; nauchnoe soobshchenie. Moskva, Otdel
nauchno-tekhn.informatsii, 1957. 13 p. (MIRA 11:2)
(Electrolytic corrosion) (Pipelines)

ANDRIYEVA, Ye. A., kand.khim.nauk (Moskva); KRASNOYARSKIY, V.V., inzh.
(Moskva); BULAYEV, V.I., inzh. (Moskva)

Means for increasing the stability of anticorrosive coatings of
cathodically protected underground pipelines. Stroi. pred. neft.
prom. 3 no.1:7-10 Ja '58. (MIRA 11:3)
(Pipelines) (Electrolytic corrosion)

SHKONDE, E.I., kand. sel'khoz. nauk; ROZOV, N.N.; SOKOLOV, A.V.,
doktor sel'khoz. nauk, otv. red.; SERDOBOL'SKIY, I.P.,
red. [deceased]; ZAVARIISKIY, V.N., red.; MUZYCHKIN,
Ye.T., red.; FEDOROVSKIY, D.V., red.; BOLOTINA, N.I.,
red.; ALEKSEYEVA, D.M., red.; ANDREYEVA, Ye.A., red.

[Agrochemical characteristics of the soils of the
U.S.S.R.; regions of the Northern Caucasus] Agrokhimiche-
skaia kharakteristika pochv SSSR; raiony Severnogo Kavka-
za. Moskva, Izd-vo "Nauka," 1964. 364 p. (MIRA 17:6)

1. Akademiya nauk SSSR. Pochvennyy institut im. V.V.Dokuchayeva.

ANDREYEVA, Ye.A.; SHCHEGLOVA, G.M.

Utilization of nitrogen fertilizers by plants. Pochvovedenie no.12:
47-54 0 '64. (MIRA 18:2)

1. Pochvennyy institut imeni V.V. Dokuchayeva, AN SSSR, Moskva.

Crystal Structurization of Calcium Hydrochlorine Aluminate."

report presented at the Section on Colloid Chemistry, VIII Mendeleyev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21; No . 4, pp. 509-511)

LARIONOV, Aleksey Nikolayevich; ANDREYEVA, Ye.D., red.; SHVARTS, A.M.,
tekhn.red.

[Seven-year plan of the new expansion of Ryazan industry; aid to
party and soviet workers, economists, propagandists and agitators]
Semiletka novogo pod"ema riazanskoj promyshlennosti; v pomoshch'
partiinyim, sovetским, khoziaistvennym rabotnikam, propagandistam i
agitatoram. Riazan', Riazanskoe knizhnoe izd-vo, 1959. 29 p.
(MIRA 13:2)

1. Sekretar' Ryazanskogo obkoma Kommunisticheskoy partii Sovetskogo
Soyuza (for Larionov).
(Ryazan Province--Economic policy)

PANYAYEVA, Ol'ga Petrovna; ANDREYEVA, Ye.D., red.; AZOVKIN, N.G.,
tekhn. red.

[Beacons lights are shining]Svetiat maiaki. Riazan', Riazan-
skoe knizhnoe izd-vo, 1961. 18 p. (MIRA 15:12)

1. Sekretar' partiynogo byuro kolkhosa "Avangard" Ryazanskogo
rayona (for Panyayeva).

(Agriculture)

YUSHINA, Lyudmila Vasil'yevna; ANDREYEVA, Ye.D., red.; AZOVKIN,
N.G., tekhn. red.

[Wage organization and payment on collective farms] Orga-
nizatsiia i oplata truda v kolkhozakh. Riazan', Riazanskoe
knizhnoe izd-vo, 1962. 23 p. (MIRA 16:12)
(Collective farms--Income distribution)

3(5)

SOV/11-59-9-5/18

AUTHOR: Andreyeva, Ye.D.

TITLE: Gabbro-Pegmatites in the Pyroxenites of the Sinyaya Mountain in the Middle Urals

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 9, pp 40-53 (USSR)

ABSTRACT: The author describes a gabbro-pegmatite formation in the ultrabasic pyroxenite rocks of the Sinyaya Mountain in the Middle Urals. Pegmatite bodies occur mainly in the hanger of the intrusion and among the pyroxenites and hornblendites. Gabbros which are in direct contact with ultrabasic rocks include only a few isolated pegmatoids. In general, the gabbro-pegmatites are large crystalline formations, the basic part of which is composed of plagioclase and hornblende which developed auto-metasomatically on the pyroxene, and of titanomagnetite. The pegmatites occur either in syngenetic schlieric form or in epigenetic vein

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Gabbro-Pegmatites in the Pyroxenites of the Sinyaya Mountain
in the Middle Urals

form. All pegmatite formations are poor in accessory minerals. Spinel occurs in pegmatites formed from pyroxenites, and sphen and apatite - in pegmatites formed from hornblendites. Chemical analyses of main minerals of gabbro-pegmatites are given in table 2. (The analyses were made by B.M. Yeloyev, T.M. Mityushina, O.P. Ostrogorskaya, O.N. Alekseyeva, and O. Nikolayeva on samples collected by the author, K.D. Timokhov, O.A. Vorob'yeva, N.V. Samoylova, and Ye.V. Sveshnikova). The author thinks that gabbro-pegmatites were formed in successive stages of auto-metasomatic processes. During the early high-temperature stage, pyroxene was replaced by hornblende, and the plagioclase - by saussurite. The replacement occurred immediately after the pegmatite stage of crystallization of primary minerals, pyroxene and plagioclase. During the later, relatively low-temperature stage,

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Gabbro-Pegmatites in the Pyroxenites of the Sinyaya Mountain
in the Middle Urals

the replacement took the form of chloritization (at a different degree) of all main minerals of pegmatites. The hornblende was especially deeply chloritized. The process of epiditization and zoisitization occurred in the interval between the two stages. According to the author, the gabbro-pegmatites of the Sinyaya Mountain are a derivative from the ultrabasic magma and appeared in the final stage of formation of the pyroxenite massif. The residuary pegmatite solution-fusion, differing from the primary magma by an increased content of alumo-silicates and water, penetrated the hanger of the intrusion, where the titano-magnetite mineralization already occurred. That explains the ore dissemination in pegmatites, especially in their leucocratic variety. In general, up to now, two groups of gabbro-pegmatites were described in professional

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Gabbro-Pegmatites in the Pyroxenites of the Sinyaya Mountain
in the Middle Urals

literature. The first group, described by A.N. Zavarnitskiy and Ye.P. Moldavantsev, characterized by a paragenetic occurrence of titanomagnetite and spinels, could be compared with gabbro-pegmatites from pyroxenites of the Sinyaya Mountain. They are also characterized by the basic composition of the plagioclase and by the absence of sulfides of copper, quartz, and potash feldspars. The second group, described by G.L. Padalka, N.A. Sirin, N.Z. Yevzikova, G.N. Staritsina, N.P. Lupanova and Ye.V. Sveshnikova, could be compared with the pegmatoid formations of the Sinyaya Mountain. In the pegmatites of this group, the plagioclase can be more acidic and potash feldspar and quartz always occur with admixture of copper and iron sulfides. The author mentions the Soviet scientist F.Yu. Levinson-Lessing. There are 2 tables,

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SOV/11-59-9-5/18

Gabbro-Pegmatites in the Pyroxenites of the Sinyaya Mountain
in the Middle Urals

1 geologic map, 3 photographs, 2 diagrams, and
8 Soviet references.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petro-
grafii, mineralologii i geokhimii AN SSSR, Moskva
(Institute of Mineral Deposits, Petrography,
Mineralogy and Geochemistry of the AS USSR, Moscow)

SUBMITTED: 24 April 1958

Card 5/5

ANDREYEVA, Ye.D.

Aplitic rocks in pyroxenites of Siney Mountain (Central Urals).
Trudy IGEM no.32:92-108 '59. (MIRA 13:8)
(Ural Mountains--Aplites)
(Ural Mountains---Pyroxenite)

ANDREYEVA, Ye.D.

Nephelinization as revealed by the studies of the urtite massif
in the Kuznetsk Ala-Tau. Trudy IGEM no.76:81-98 '62.

(MIRA 15:9)

(Kuznetsk Ala-Tau--Urtite)
(Kuznetsk Ala-Tau--Nephelinite)

LEBEDEV, A.P.; ANDREYEVA, Ye.D.

Third All-Union Conference on Petrography. Izv. AN SSSR. Ser.
geol. 28 no.11:121-123 N'63. (MIRA 17:2)

PETERSIL'YE, I.A.; ANDREYEVA, Ye.D.; SVESHNIKOVA, Ye.V.

Organic matter in the rocks of some alkali massifs in Siberia.
Izv. AN SSSR, Ser. geol. 30 no.6:26-38 Je '65.

(MIRA 18:6)

1. Geologicheskii institut Kol'skogo filiala im. S.M. Kirova
AN SSSR, g. Apatity, i Institut geologii rudnykh mestorozhdeniy,
petrografii, mineralogii i geokhimii AN SSSR, Moskva.

PETERSIL'YE, I.A.; ANDREYEVA, Ye.D.; SVESHNIKOVA, Ye.V.

Hydrocarbon gases and disseminated bitumens in the rocks of some
alkali massifs in Siberia. Dokl. AN SSSR 161 no.3:670-672 Mr '65.
(MIRA 18:4)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralologii i geokhimii AN SSSR i Geologicheskii institut Kol'-
skogo filiala AN SSSR. Submitted November 24, 1964.

MILOVANOV, J.V.; ANDREYEVA, Ye.I.

Use of washing compounds in bottle washing machines. Spirt.prom.
23 no.8:14 '57. (MIRA 11:1)

1.Leningradskiy likero-vodochnyy zavod.
(Bottle washing) (Washing powders)

ANDREYEVA, Ye.I. (Riga)

Organizing the control of poliomyelitis and its consequences in the Latvian S.S.R. Sov. zdrav. 22 no.6:93'63.

(LATVIA--POLIOMYELITIS)

(MIRA 16:9)

ANDREYEVA, Yevgeniya Ivanovna

[For 170 centners of meat and 400 centners of milk per 100 hectares of farm land] Za 170 tsentnerov miassa i 400 tsentnerov moloka na 100 gektarov sel'skokhoziaistvennykh ugodii. Tambov, "Tambovskaya pravda," 1957. 67 p.
(Stock and stockbreeding) (MIRA 12:3)

ANDREYEVA, Ye.I.; MARKARYAN, K.K.

One hundred and seventy centners of meat and four hundred centners
of milk per hundred hectares. Nauka i pered.op.v sel'khoz. 7 no.7:
10-13 IV '57. (MLRA 10:8)

1. Predsedatel' kolkhoza imeni kominterna (for Andreyeva)
(Stock and stockbreeding) (Dairying)

ANDREYEVA, Ya. I., Geroy Sotsialisticheskogo Truda; ANDRIANOV, L. T.,
prepodavatel'

Effect of perennial grasses on soil fertility and feed balance.
Zemledelie 8 no.12:40-43 D '60. (MIRA 13:11)

1. Predsedatel' kolkhoza imeni Kominternu, Michurinskogo rayona,
Tambovskoy oblasti (for Andreyeva). 2. Sel'skokhozyaystvennyy
tekhnikum imeni I.V. Michurina (for Andrianov).
(Grasses) (Soil fertility)

ANDREYEVA, Ye.I.

Materials on the lichen flora of Akmolinsk Province (based on studies at the "Northern Station" in Barankul'skiy District). Trudy Inst. bot. AN Kazakh. SSR 9:221-236 '61. (MIRA 14:3)
(Barankul'skiy District--Lichens)

ANDREYEVA, Ye.I.

Lichens in the penepplain part of Bet-Pak-Dala. Trudy Inst.
bot. AN Kazakh. SSR 15:178-203 '63. (MIRA 16:9)

ANDREYEVA, Ye.I. (Riga)

Organization of creches in the Latvian S.S.R. Sov. zdravookhr.
22,no.3:34-47 '63 (MIRA 17:1)

ANDREYEVA, Ye.I., kand. s el'skokhoz. nauk

Seed disinfectants and the methods for their use. Zhur. VKHO
9 no.5:504-511 '64 (MIRA 16:1)

USOSKINA, R.Ya., kand. med. nauk (Riga 12, ul. Lenina, d. 138, kv.24-a);
KRUMIN', K.A. [Krumins, K.], kand. med. nauk; ANDREYEVA, Ye.I.,
kand. med. nauk

Polyclinical service for children with diseases and traumas of
the locomotor apparatus in the Latvian S.S.R. Ortop., travm.
i protez. 26 no.11:9-16 N '65. (MIRA 18:12)

1. Iz Rihzskogo instituta travmatologii i ortopedii (direktor -
dotsent V.K. Kalnberz [Kalnberzs, V.]) i otdela lechetno-profi-
lakticheskoy pomoshchi detyam i materyam (nachal'nitsa Ye.I.
Andreyeva) Ministerstva zdravookhraneniya Latviyskoy SSR.

AUTHORS Andreyeva, Ye. I., Kuperman, M. Ye. Krasil'nikova, Z.V. 20-5-50/54

TITLE An Electron Microscope Investigation of the Effect of the Native Substance of Actinomyces and Chemical Compounds upon Bacterium (Pseudomonas) Malvacearum E. Smith of the Cotton Plant. (Elektronno-mikroskopicheskaya issledovaniye deystviya nativnogo veshchestva Actinomyces i khimicheskikh soyedineniy na vzbuditelya gommoza khlopchatnika - Pseudomonas malvacearum E. Smith).

PERIODICAL Doklady Akademii Nauk, 1957, Vol. 115, Nr 5, pp. 1031 - 1032 (USSR.).

ABSTRACT Pseudomonas malvacearum is one of the most frequent and most dangerous disease of the cotton plant. Many chemical preparations and native substances were used in attempting to combat its cause, which were separated from its natural antagonists. Among the latter actinomyces is the most frequent. Under the atoms of these mushrooms Nr. 2812 was found to be the most active. Its activity was examined by means of several methods. Under the electron microscope EM-3 (10.000 and 12.500 x) some sound bacteria were found in the Pseudomonas malvacearum zone, which, when resowed, began to grow and were virulent. After one day the bacteria had branches in the culture, which, however, disappeared after 3 days. After 10 days the entire bacterial mass formed destroyed parts of the bacterial cells in the Petri dish which, when re-sowed, show growth on the culture medium. The electron-microscopical investigation made it possible to study the influence exercised by the native substance of the actinomyces strain Nr. 2812 upon the cause of

Card 1/2

Andreyeva, Ye. I.

AUTHORS: Andreyeva, Ye. I., Kuperman, M. Ye., Krasil'nikova, Z.V. 20-3-43'46

TITLE: An Electromicroscopic Investigation of the Lysis of Botrytis Cinerea and Fusarium Graminearum by Antibiotic Substances Secreted by Actinomycetes (Elektronnomikroskopicheskoye issledovaniye lizisa Botrytis Cinerea i Fusarium graminearum antibioticheskim veshchestvom vydelyayemym aktinomitsetami)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 3, pp. 508-509 (USSR)

ABSTRACT: Most of the proved chemical reagents have proved little efficient against fusarium and botrytis cinerea. The former disease in plants does not only affect grain, but also the interior of the cereals, whereas the second fungus affects, also oleraceous plants besides corn. On the other hand, satisfactory results were obtained against the agents of this disease by antibiotics of the actinomycetes. The native substance secreted by actinomycetes Nr 1639 (AN USSR) has proved most efficient during the investigations by the authors. This substance was obtained with a culture of the fungus according to N.A.Krasil'nikov (reference 1). After 3 to 4 days the formation of sterile zones round the antagonist in cultures of the two pernicious fungus was observed. The lysis process was observed, by 5000 times enlargement. The growth zones of actinomycetes were also investigated, as well as those of the pathogenous fungus. As can be seen from the photographs fig. 1:1,2) sound fruits and "hyphen"

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An Electromicroscopic Investigation of the Lysis of Botrytis 20-3-43/46
Cinerea and Fusarium Graminearum by Antibiotic Substances Secreted by Actinomy-
 cetes.

of Botrytis cinerea are formed. Various lysis stages of these
 two organs of the "Schadpilz"(German) were observed in the steri-
 le zones. In the actinomyces zone were there found only sound
actinomyces hyphen and spores which have shown no symptoms of
 destruction. The investigations shew a high activity of the actino-
myces-anti-biotium. The picture obtained from the observation
 of the lysis of fusarium graminearum was analogous to the pre-
 vious one. (fig. 1:9), except that the non-affected part of the
 hyphes becomes first more compact and conserves its shape. There
 are 1 figure and 3 references, all of which are Slavic

PRESENTED: June 11, 1957, by S. I. Vol'fkovich, Academician
 SUBMITTED: May 30, 1957
 AVAILABLE: Library of Congress

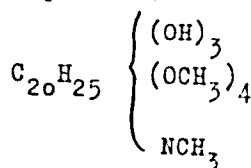
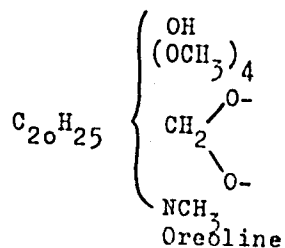
Card 2/2

AUTHORS: Bocharnikova, A. V., Andreyeva, Ye. I. SOV/79-28-10-57/60
 TITLE: A New Alkaloid From the Central-Asian Plant Delphinium
 Oreophilum (Novyy alkaloid iz sredneaziatskoy zhivokosti)
 PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10,
 pp 2892 - 2894 (USSR)
 ABSTRACT: The initial material used in these investigations were
 the supraterraneous parts of the plant which, though
 closely related to the mountain plant Delphinium oreo-
 philum Huth, differs from the latter in morphological
 characteristics. By means of dichloro ethane, the bases
 (0,69%) were extracted from the dried plant. With paper
 chromatography, five alkaloids of R_f 0,35; 0,47; 0,55;
 0,68; 0,81, were determined. In the report under con-
 sideration, the precipitation and investigation of the two
 alkaloids R_f 0,47 and 0,55 are described (labelled (I)
 and (II), respectively). They could be separated, as
 the solubilities of their bases and salts differed.
 The alkaloid (I) corresponds to the formula $C_{26}H_{43}O_7N$,
 with an OH-, methylene-dioxy- and N-alkyl group and four

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A New Alkaloid From the Central-Asian Plant *Delphinium Oreophilum* SOV/79-28-10-57/60

OCH₃ groups, but does not contain an ester group. The infrared absorption spectrum of the base (I) is closely related to that of licoctonine, showing the bands of the OH group in the 3500 cm⁻¹ field and not containing any bands of the carbonyl groups. This newly discovered alkaloid was named oreoline. The saponification of the methylene-dioxy group of oreoline yields the compound C₂₅H₄₃O₇, with three OH-, four OCH₃ groups and with a N-alkyl group. Its infrared spectrum shows the bands of the hydroxyl groups, whereas those of the carboxyl groups are not present:



The saponification product of the methylene-dioxy group of oreoline.

Card 2/3

A New Alkaloid From the Central-Asian Plant Delphinium
Oreophilum SOV/79-28-10-57/60

The alkaloid (II) was obtained from the mother-lye as a perchlorate after the precipitation of oreoline. It is identical with methyl licaconine. The investigation of the other alkaloids is being continued. There are 2 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze (All-Union Scientific Chemopharmaceutical Research Institute imeni S.Ordzhonikidze)

SUBMITTED: September 6, 1957

Card 3/3

17 (2)

AUTHORS:

Gar, K. A., Yevteyeva, N. V.,
Andreyeva, Ye. I.

SOV/20-127-6-41/51

TITLE:

On the Fungicidal Activity of the δ -Isomer and of the Mixtures
of δ - and γ -Isomers of Hexachlorocyclohexane

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1290 - 1293
(USSR)

ABSTRACT:

The outstanding insecticidal properties of the γ -isomer of the compound mentioned in the title facilitated the production of a number of chemical insecticides for agriculture as well as for veterinary and sanitary disinfection (insect killing). Commercial hexachlorocyclohexane contains 6 isomers. The content of γ -isomer, which is practically the only insecticide, amounts to 10-12%. Many procedures have recently been developed for the purpose of raising the content of γ -isomer. The non-toxic isomers are mostly removed by means of extraction by organic solvents. They may then be further used. Preparations enriched in this way are not only more active but they also change the taste of the crops less than commercial hexachlorocyclohexane. These enriched preparations are particularly important and valuable for seed treatment. In this connection, and in view

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On the Fungicidal Activity of the δ -Isomer and of the SOV/20-127-6-41/51
Mixtures of δ - and δ' -Isomers of Hexachlorocyclohexane

of the hypothesis on the poisoning of living organisms by K. A. Gar (Ref 1), the authors carried out a thorough investigation of the remaining isomers, particularly of their fungicidal and bactericidal activity. The results obtained were not only interesting but they instigated further investigations of this problem. It was ascertained that the α - and β -isomers have practically no activity whereas the δ' -, and particularly the δ -isomers possess fungicidal properties, the toxicity of the latter being very specific for microorganisms. Figure 1 shows photographs of the Petri dishes in which spores and mycelia of the fungi *Fusarium* and *Diplodia* were sown upon potato-dextrose-agar with addition of 0.05; 0.01 and 0.002% δ' - and δ -isomers. The addition of δ' -isomer to the nutrient medium inhibited the growth of the colonies only in the case of *Diplodia zeae* (Schw.) Lev. The δ -isomer, on the other hand, caused either a complete or an extensive suppression of growth in all species of fungi investigated (*D.zeae*, *Fusarium oxysporum*, *Botrytis* sp., a species of *penicillium*, yeast, etc). The strongest inhibition by medium concentrations is worth mentioning. This particular effect of the two isomers suggests the capability of

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On the Fungicidal Activity of the δ -Isomer and of the Mixtures of δ - and γ -Isomers of Hexachlorocyclohexane SOV/20-127-6-41/51

forming so-called tong-like complex compounds with some metals which participate in these or other ferment systems (Ref 3). On the basis of the results obtained, informative field experiments were carried out at the Dolgoprudnaya agrokhimicheskaya stantsiya (Dolgoprudnaya Agrochemical Station) of the Institute mentioned under "Association" (Tables 1 and 2). The treatment of the wheat- and linseeds favored their germinating power, and greatly reduced the affection by fusariosis, or fusariosis and polysporosis respectively. Wheat was fully relieved of wheat smut (*Tilletia tritici*). The effect was even better than that of the mercury preparations. Doctor R. Smrzh, Yu. N. Bezobrazov, and A. V. Molchanov supplied samples of the preparations. There are 1 figure, 2 tables, and 3 Soviet references.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicides)
PRESENTED: May 5, 1959, by S. I. Vol'fkovich, Academician
SUBMITTED: April 29, 1959
Card 3/3

ANDREYEVA, Ye.I.; MARTYNOVA, Ye.A.; YURKOVA, A.G.; VOLCHANETSKAYA, T.M.

Investigation of new disinfectants of grain and cottonseed.

[Trudy] NIUIF no.164:19-20 '59.

(MIRA 15:5)

(Seeds--Disinfection)

KRUTITSKAYA, M.N., ORLOV, V.I., IVANOVA, B.S., ANDREYEVA, Ye.I.,
GOLYSHIN, N.M., ZUBOV, M.F.

Investigation of zinc subchromates as new fungicides for the
treatment of green plants and seeds. [Trudy] NIUIF no.167:173-185
'60. (MIRA 13:8)

(Zinc chromates)

(Fungicides)

MEL'NIKOV, N.N.; ANDREYEVA, Ye.I.; SHVETSOVA-SHILOVSKAYA, K.D.; IVANOVA, S.N.;
SKALOZUBOVA, A.V.

Disinfectants of seeds not containing mercury. Khim. prom. no.10:
26-28 0 '61. (MIRA 15:2)
(Seeds--Disinfection)

ANDREYEVA, Ye. I., kand. sel'skokhoz. nauk

Seed disinfectants. Zashch. rast. ot vred. i bol. 6 no.6:
34-35 Je '61. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut po udobreniyam i
insektofungisidam imeni Samoylova.

(Seeds—Disinfection) (Insecticides)
(Fungicides)

ANDREYEVA, Ye.I., kand.sel'skokhoz,nauk

Methods for laboratory testing of new seed disinfectants.
Zashch. rast. ot vred. i bol. 6 no.8:40-41 Ag '61.

(MIRA 15:12)

1. Laboratoriya fitopatologii Nauchno-issledovatel'skogo
instituta po udobreniyam i insektofungisidam imeni Ya.V. Samoylova,
st. Dolgoprudnaya.

(Fungicides)
(Biological assay)

SHVETSOVA- SHILOVSKAYA, K.D.; MEL'NIKOV, N.N.; ANDREYEVA, Ye.I.;
BOCHAROVA, L.P.; SAPOZHKOVA, Yu.N.

Organic insectofungicides. Part 57: Synthesis, insecticidal
and fungicidal properties of certain arsenic organic compounds.
Zhur. ob. khim. 31 no.3:845-849 Mr '61. (MIRA 14:3)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni
Ya. V. Samoylova.

(Arsenic organic compounds)
(Insecticides)(Fungicides)

ANDREYEVA, Ye.I.; VOLCHANETSKAYA, T.M.

Disinfecting cottonseed by a semidry method. [Trudy] NIUIF
no.171:123-128 '61. (MIRA 15:7)
(Cottonseed--Disinfection)